APR 1 8 2008

AMENDMENTS

Please amend the claims as follows:

1. (currently amended) The method of Claim 3 ~~A method for measuring a volume flow parameter with acoustic energy, the method comprising:~~

~~(a) measuring the volume flow parameter as a function of acoustic energy transmitted from an annular configuration of elements of a transducer array; and~~

~~(b) performing two-dimensional ultrasound imaging with the transducer array;~~

wherein the transducer array comprises at least three rows of elements, the three rows being straight along an azimuth dimension and having rectangular elements;

further comprising:

(c) using a first group of elements from the at least three rows of elements into a ring annular element for (a);

(d) using a second group of elements from at least one of the at least three rows of elements into a center annular element within the ring annular element for (a); ~~and~~

(e) using at least one of the at least three rows of elements for (b);

(f) providing different transmit waveform polarity and apodization to different groups of elements for (a) simultaneously; and

(g) focusing as a function of apodization and delay along the at least one row of elements for (b).

2. (currently amended) The method of Claim [[1]] 3 wherein (a) comprises:

(a1) transmitting a uniform far field acoustic pattern from the annular configuration of elements;

~~(a2) receiving a wide and a narrow far field acoustic pattern from the annular configuration of elements; and~~

(a3) calculating the volume flow parameter as a function of a first velocity and a first power associated with the uniform far field acoustic pattern and a second power associated with the narrow far field acoustic pattern.

3. (previously presented) A method for measuring a volume flow parameter with acoustic energy, the method comprising:

(a) measuring the volume flow parameter as a function of acoustic energy transmitted from an annular configuration of elements of a transducer array; and

(b) performing two-dimensional ultrasound imaging with the transducer array;

wherein (b) comprises operating the transducer array as a 1.5D array.

4. (currently amended) The method of Claim [[1]] 3 wherein (b) comprises generating one of a B-mode and a Doppler mode image;

further comprising:

(c) ~~(b)~~ positioning the transducer array relative to a vessel of interest based at least in-part on the image.

5. (currently amended) The method of Claim [[1]] 3 wherein (a) comprises calculating volume flow with uniform sensitivity technique.

6-8. (cancelled)

9. (currently amended) A system for measuring a volume flow parameter with ultrasound, the system comprising:

a transducer array having a plurality of elements;

a processor operable to calculate the volume flow parameter as a function of acoustic energy received with an annular configuration of elements of the transducer array; and

a display operable to display the volume flow parameter and a two-dimensional image responsive to acoustic energy received with the transducer array;

wherein the transducer array comprises at least four rows of elements in a fully sampled NxM grid providing a rectangular outer circumference of the array, the annular configuration comprising a first group of elements from the at least four rows of elements arranged as a ring annular element and a second group of elements from at least one of the at

least four rows of elements arranged as a center annular element within the ring annular element; and

wherein the two-dimensional image is responsive to at least one of the at least four rows of elements; and

wherein the transducer array comprises a 1.5D array and wherein the two-dimensional image is responsive to the acoustic energy received with the 1.5D array and wherein the annular configuration also uses the transducer array.

10. (original) The system of Claim 9 further comprising:

a first array interconnect capable of connecting the elements of the transducer array for two-dimensional imaging; and

a second array interconnect for connecting a first subset of the elements as an annular array for the annular configuration of elements.

11. (original) The system of Claim 9 further comprising:

a first Doppler path operable to obtain a first velocity and a first power associated with a uniform far field acoustic pattern as a function of the annular configuration; and

a second Doppler path operable to obtain a second power associated with a narrow far field acoustic pattern as a function of the annular configuration;

wherein the processor is operable to calculate the volume flow parameter as a function of the first velocity, the first power and the second power.

12. (cancelled)

13. (original) The system of Claim 9 wherein the two-dimensional image comprises one of a B-mode and a Doppler mode image.

14. (original) The system of Claim 9 wherein the annular configuration of elements is operable to uniformly insonify a vessel with an aperture of similar azimuth and elevation sizes.

15. (cancelled)

16. (original) The system of Claim 9 further comprising:

a transmitter operable to simultaneously generate transmit waveforms with opposite polarity and different apodization for different annular elements of the annular configuration; and

a receiver operable to simultaneously form two beams in response to a transmission;

wherein the two-dimensional image is responsive to first signals from the receiver focused as a function of apodization and delay along at least one row of elements of the transducer array and wherein the processor is operable to calculate volume flow as a function of the two beams received in response to transmission by the different annular elements.

17. (original) The system of Claim 9 wherein the transducer array comprises first and second rows extending a first length along an azimuth dimension and a third row extending the first length wherein the third row includes at least one kerf extending along the azimuth dimension less than the first length.

18-20. (cancelled)